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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,490	03/30/2004	Iwao Anzai	S305-222U1 (NP135-1)	4903

570 7590 10/29/2004

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2005 MARKET STREET, SUITE 2200  
PHILADELPHIA, PA 19103-7013

EXAMINER

LANGEL, WAYNE A

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.



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SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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10/813490

EXAMINER
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ART UNIT	PAPER NUMBER
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DATE MAILED:

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on \_\_\_\_\_ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), \_\_\_\_\_ days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

**Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:**

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-948. |
| 3. <input checked="" type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449.      | 4. <input type="checkbox"/> Notice of Informal Patent Application, PTO-152.       |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474.     | 6. <input type="checkbox"/> _____   |

**Part II SUMMARY OF ACTION**

1. ☒ Claims 1-4 are pending in the application.

Of the above, claims \_\_\_\_\_ are withdrawn from consideration.

2. ☐ Claims \_\_\_\_\_ have been cancelled.
3. ☐ Claims \_\_\_\_\_ are allowed.
4. ☒ Claims 1-4 are rejected.
5. ☐ Claims \_\_\_\_\_ are objected to.
6. ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed \_\_\_\_\_, has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --  
(e) The invention was described in (1) an application for patent, published under Section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 4 are rejected under 35 U.S.C. § 102(e) as being anticipated by Fukunaga. Fukunaga discloses an autothermal reforming process wherein the catalyst comprises rhodium on an alumina carrier containing cerium oxide in an amount of 5 to 40

weight percent and alumina in an amount of 60 to 95 weight percent. (See paragraph [0102] and claims 1-12.) Regarding claim 4, Fukunaga discloses these feedstocks in paragraph [0047].

It is noted that Fukunaga has an effective filing date of November 5, 2001, which is before applicant's earliest effective United States filing date, but after applicant's foreign priority date. However there is no certified English translation of record for applicant's foreign priority document, so it cannot be determined whether applicant is entitled to the foreign priority date of May 11, 2001.

Claims 2 and 3 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Fukunaga. Claims 2 and 3 would be prima facie obvious over Fukunaga, since it would be within the skill of one of ordinary skill in the art to determine suitable temperatures and pressure at which to carry out the autothermal reforming step.

Claims 1-4 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Grieve et al. or Wieland et al. in view of Ino et al. Grieve et al. and Wieland et al. both disclose autothermal processes for producing a fuel gas wherein the catalyst comprises a platinum group metal such as rhodium on an alumina support, wherein the catalyst may also contain cerium oxide. (See paragraphs [0049] and [0050], and claim 4 of Grieve

et al., and paragraph [0012] and claims 1-8 of Wieland et al.) The difference between the processes disclosed by Wieland et al. and Grieve et al., and that recited in applicant's claims, is that Wieland et al. and Grieve et al. do not specifically disclose that the support should contain 5 to 40% by mass of the cerium oxide and 60 to 95% by mass of the aluminum oxide. Ino et al. discloses a catalyst for steam reforming of hydrocarbons comprising a platinum group metal on a carrier which comprises 5 to 40 weight percent of ceria and 60 to 95 weight percent of alumina. (See the Abstract, column 3, lines 14-30 and the paragraph bridging columns 3 and 4.) It would be obvious to employ the carrier of Ino et al. as the carrier for the catalyst in the process of either Wieland et al. or Grieve et al., since Wieland et al. and Grieve et al. both suggest that the carrier may contain any suitable amounts of alumina and ceria, and also suggest the equivalence between steam reforming and autothermal reforming. (See paragraphs [0004] and [0005] of Wieland et al., and claim 4 of Grieve et al.)

Claim 4 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The recitation of "boiling point within the range of those thereof" is indefinite.

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Hwang et al., Towler et al. and Martin et al. are made of record for disclosing autothermal processes employing a catalyst which includes rhodium.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wayne A. Langel whose telephone number is (571) 272-1353. The examiner can normally be reached on Monday through Friday from 8 A.M. to 3:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on (571) 272-1358. The fax phone number for this Group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or public PAIR. Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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WAL:cdc

October 27, 2004

*Wayne A. Langel*  
WAYNE A. LANGEL  
PRIMARY EXAMINER